

AMENDMENTS TO THE CLAIMS

1 (Currently Amended). An implant that supplements, repairs, or replaces a native heart valve leaflet or leaflets comprising

[a] an elastic scaffold sized and configured to rest in net compression adjacent all or a portion of a native heart valve annulus, at least a portion of the scaffold defining a pseudo-annulus,

a neoleaflet element coupled to the scaffold within pseudo-annulus and being sized and shaped to occupy the space of at least a portion of one native heart valve leaflet to provide a one-way valve function that, in response to a first pressure condition, assumes a valve opened condition within the pseudo-annulus and, in response to a second pressure condition, assumes a valve closed condition within the pseudo-annulus, and

spaced-apart struts appended to the scaffold and being sized and configured to contact tissue at or near or within opposite commissures of the heart valve annulus to brace the scaffold against migration within the annulus during the one-way valve function, the elastic scaffold, when resting in net compression, applying tension to the struts to outwardly displace and separate tissue along a major axis of the native heart valve annulus for reshaping the heart valve annulus for leaflet coaptation.

2 (Original). An implant according to claim 1
wherein the scaffold comprises a wire-form structure.

3 (Original). An implant according to claim 1
wherein at least one of the struts comprises a wire-form structure.

4 (Original). An implant according to claim 1
wherein the scaffold and the struts each comprises a wire-form structure.

5 (Original). An implant according to claim 1
wherein the neoleaflet element includes a bridge appended to the scaffold.

6 (Original). An implant according to claim 5
wherein the neoleaflet element includes a material covering the bridge.

7 (Original). An implant according to claim 5
wherein the bridge is a wire-form structure.

8 (Withdrawn). An implant according to claim 1
wherein the neoleaflet element includes a duckbill valve within the psuedo-annulus.

9 (Withdrawn). An implant according to claim 1

wherein the neoleaflet element includes a membrane within the pseudo-annulus.

10 (Original). An implant according to claim 1

wherein the neoleaflet element is sized and configured to coapt with a native leaflet when in the valve closed condition.

11 (Original). An implant according to claim 1

wherein the scaffold, neoleaflet element, and the struts are collapsible for placement within a catheter.

12 (Withdrawn). An implant according to claim 1

wherein at least one of the struts carries a structure sized and configured to increase a surface area of contact with tissue at, above, or below the annulus.

13 (Withdrawn). An implant according to claim 1

further including at least one structure appended to the scaffold and being sized and configured to contact tissue at, above, or below the heart valve annulus to stabilize the scaffold.

14 (Original). An implant according to claim 1

wherein the scaffold, neoleaflet element, and struts include materials and shapes to provide a spring-like bias for compliance with anatomy near or within the heart valve annulus.

15 to 20 (Canceled).

21 (Currently Amended). A method for supplementing, repairing, or replacing a native heart valve leaflet or leaflets comprising ~~the steps of~~

introducing an implant as defined in claim 1 into a heart, and

providing a one-way valve function that, in response to a first pressure condition, assumes a valve opened condition and, in response to second pressure condition, assumes a valve closed condition by locating the scaffold as defined in claim 1 in net compression adjacent all or a portion of a native heart valve annulus to define a pseudo-annulus, with the neoleaflet element as defined in claim 1 occupying the space of at least a portion of one native heart valve leaflet to provide the one-way valve function, and with the spaced-apart struts as defined in claim 1 contacting tissue at or near or within opposite commissures of the heart valve annulus to brace the scaffold against migration within the annulus during the one-way valve function and apply tension

to outwardly displace and separate tissue along a major axis of the native heart valve annulus for reshaping the heart valve annulus for leaflet coaptation.

22 (Original). A method according to claim 21

wherein the introducing step comprises using an open heart surgical procedure.

23 (Original). A method according to claim 21

wherein the introducing step comprises using a surgical procedure in which the implant is carried within a catheter.

24 (Original). A method according to claim 21

wherein the introducing step comprises using an intravascular surgical procedure.